

Original Research Article

Prevalence of hygiene awareness during menstruation period among rural women of West Bengal, India

Shyamali Bera¹, Anup Adhikari^{2*}

¹Department of Clinical Nutrition and Dietetics, Vidyasagar University, West Bengal, India

²Centre for Wellness and Research, Kolkata, West Bengal, India

Received: 18 November 2023

Revised: 20 January 2024

Accepted: 22 January 2024

*Correspondence:

Dr. Anup Adhikari,

E-mail: dranupadhikari@yahoo.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: Menstruation is a physiological process of women. Reproductive infection during the menstrual period is a common phenomenon in women in rural areas of India. The present study was conducted to find out the prevalence of hygiene awareness in rural women of West Bengal.

Methods: Fifty rural women from the West Medinipur District of West Bengal were studied. Questioner methods were followed to know the knowledge, attitude, and practice towards menstruation hygiene.

Results: Proper knowledge of menstruation was absent in a large number of women but a large number of women (80%) took care of their hygiene during menstrual periods. 70% of women agreed to maintain personal hygiene to prevent reproductive-related diseases. 44% of women had a positive attitude towards the cleanness of genital areas with clean water whereas 56% of women did not show any interest. 96% of women change sanitary pads for 2-4 times a day to maintain menstrual hygiene. For disposing of used sanitary pads, 80% of women use home garbage areas whereas 20% of women use open fields outside the home.

Conclusions: From the above study it could be concluded that hygiene awareness during the menstruation period among rural women of West Bengal, India is not satisfactory. Educational intervention is required.

Keywords: Menstruation, Personal hygiene, Attitude, Awareness

INTRODUCTION

Menstruation is a physiological process of women that is generally initiated at the age of 9-12 years and continues till menopause. Reproductive infection during the menstrual period is a common phenomenon in women, especially in rural areas. Women's reproductive infections during menstruation can be prevented by the practice of menstrual hygiene.^{1,2} In Rural areas of India, menstruation hygiene faces social, cultural, and religious restrictions which greatly interrupt menstrual hygiene management. In India, menstruation is still considered a taboo in the society. In many parts of the country

especially in rural areas women are not taught about menstrual hygiene so they face a lot of difficulties and challenges at home, schools, and workplaces.^{3,4} The risk for disease increases where there is a lack of knowledge on proper hygiene practices, or facilities available for managing waste. Additionally, these issues are compounded by a lack of access to clean water.⁴ The present study was conducted to assess the knowledge, attitude, and practice of menstrual hygiene of rural Bengali women of Paschim Medinipur district in West Bengal. The present study aimed to assess the awareness level, and knowledge of menstrual hygiene along with related diseases, and practices followed during their menstrual cycle.

METHODS

Study design and population

The study was a cross-sectional study. Data were collected from women of rural areas in Belda, Paschim Medinipur, West Bengal. 50 rural women were interviewed separately from the village area of Paschim Medinipur district of West Bengal. Samples were selected randomly by selecting a part of the village where the socioeconomic status of the population was mixed with higher, middle, and poor socio-economic status. The study was conducted in April 2022 as a part of the project of the Master's thesis of Shyamali Bera, a student of Vidyasagar University, Midnapore, West Bengal, India. The studied women were within the age group of 15-25 years and 26- 34 years. The total no of participants for this study was 50. The study was non-invasive and the subjects were all adults. Prior consent was taken from all participants before the study.

Inclusion and exclusion criteria

Women who gave verbal consent, only those subjects were included.

Questionnaires

A structured questionnaire was developed to know about the socio-economic, basic anthropometric measurements, and basic health information about the subjects. The KAP questionnaire was used to formulate and scoring was done by Likert scale.⁶ All the subjects were interviewed separately. The questionnaire was first prepared in English. Then, it was translated into Bengali by an expert in that language keeping semantic equivalence.

Anthropometric measurements

Height and weight were measured with a stadiometer and electronic weighing scale according to the ISAK protocol.⁵

Statistical analysis

Statistical analysis was done using SPSS version 22.

Study tools

A structured questionnaire regarding the socio-economic, and demographic profile of the participants. The KAP questionnaire had three sections; Section A: Consisted of questions related to socio-demographic characteristics and knowledge about menstrual hygiene, Section B: Consisted of questions related to perception regarding menstruation hygiene and Section C: Comprised of questions on the practice of menstrual hygiene. The questionnaire was first prepared in English. Then, it was translated into Bengali by an expert in that language keeping semantic equivalence.

RESULTS

The average age of the studied women was 27.5 ± 7.6 yr with an average height of 161.1 ± 6.8 cm and an average weight of 52.22 ± 10.6 kg. The nuclear family was the most common family pattern observed. Knowledge of menstruation of Fifty studied Bengali Rural women were shown in (Table 1).

Table 1: Knowledge on menstruation hygiene (n=50).

Questions	N (%)
The menstruation process is natural for women.	
a) Yes	48 (96)
b) No	0 (0)
c) Don't know	2 (4)
Do you know from which organ menstrual blood comes from?	
a) Uterus	28 (56)
b) Bladder	11 (22)
c) Don't know	11 (22)
Is it Important to take care of personal hygiene?	
a) Yes	40 (80)
b) No	7 (14)
c) Don't know	3 (6)
Do you know the following absorbent products used during menstruation?	
a) Sanitary pad	39 (78)
b) Old clothes /towels	5 (10)
c) Do not know	6 (12)
Do you know/have any knowledge of menstruation before menarche?	
a) Yes	8 (16)
b) No	40 (80)
c) Don't know	2 (4)

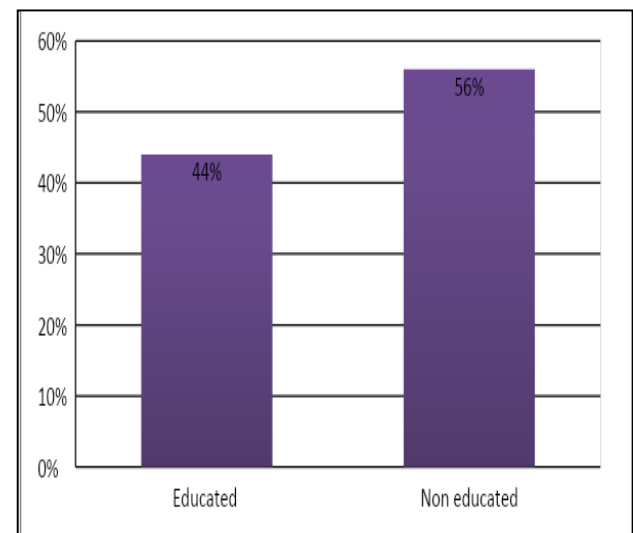


Figure 1: Educational status of women of the present study in percent.

Total 96% knew that menstruation is a natural process of women but nobody knew the source of menstrual blood.

Table 2: Attitude towards menstruation hygiene (n=50).

Questions	Agree, N (%)	Disagree, N (%)	Do not know, N (%)
Do you think it is important to maintain hygiene during menstruation to prevent disease?, a) Agree b) Disagree c) Do not know	35 (70)	8 (16)	7 (14)
Do you think access to clean water for cleaning the genital area is important?, a) Agree b) Disagree c) Do not know	22 (44)	20 (40)	8 (16)
Do you think washing hands before and after cleaning of genital area is important?, a) Agree b) Disagree c) Do not know	40 (80)	2 (4)	8 (16)
Do you think menstruation is a disease?, a) Agree b) Disagree c) Do not know	0 (0)	45 (90)	5 (10)
Do you think cleaning panties/underwear using only water is enough?, a) Agree b) Disagree c) Do not know	15 (30)	25 (50)	10 (20)

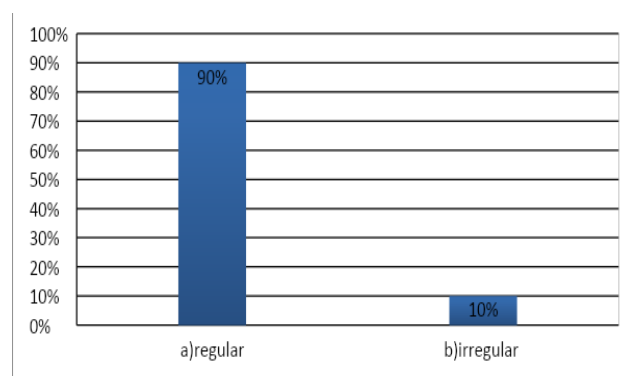
Total 80% of women knew the importance of personal hygiene during menstruation. The (Table 2) showed the attitude towards menstruation of the studied women of the present study. Practice on menstruation hygiene was shown in (Table 3).

Table 3: Practice on menstruation hygiene (n=50).

Questions	N (%)
During the menstruation period, it is good to clean hair with shampoo.	
a) Agree	38 (76)
b) Disagree	10 (20)
c) Don't know	2 (4)
Washing hands is hygienic before cleaning genital areas	
a) Agree	45(90)
b) Disagree	2(4)
c) Don't know	3(6)
How many times do you change your sanitary pad?	
a) 0-1 times	2 (4)
b) 2-4 times	48 (96)
c) Do not change	0 (0)
What do you use while Washing panties?	
a) Water	45 (90)
b) Water and soap	3 (6)
c) Don't wash	2 (4)
Where do you dispose your used sanitary pad ?	
a) Dustbin	40 (80)
b) Flushing down the toilet	2 (4)
c) Open field	8 (16)

A large number of women (76%) clean their hair during the menstruation period whereas 90 % of women clean their hands before and after genital areas. 96% change the sanitary pads 2-4 times in a day. 80% of women dispose the used sanitary pads in dustbins. The (Figure 1) showed the educational status of the studied women. The (Figure

2) showed the distribution of population depending on regularity of the flow.

**Figure 2: Distribution of population depending on regularity of the flow.**

DISCUSSION

The study was conducted on Bengali Rural women on the prevalence of hygiene awareness during menstruation. 96% of women knew that the menstrual cycle is a natural process whereas 4% of women did not have any knowledge on menstruation whether menstruation is a natural or unnatural process (Table 1). The reason behind their unawareness was illiteracy as women in rural areas did not have a chance to go to school due to poverty or social barriers^{7,8,9}. Education for women in rural Bengal is still a challenge.^{10,11} In the present study, more than 50% of women were illiterate without primary education (Figure 1). The Impact of education or literacy was reflected when physiological knowledge of menstruation was considered. A large number of women did not have proper knowledge of menstruation. 22% of women had the idea that menstrual blood comes from the urinary bladder whereas 22% did not have any idea from where blood comes. Only 56% of studied women knew that menstrual blood comes from Uterus. Solvic et al also observed similar findings while working on Indian rural and urban women.¹²

When personal hygiene was considered, 80% of studied women took care of their hygiene during menstrual periods whereas 14% of women did not agree that personal hygiene was important during menstrual periods. The remaining 6% of women did not have any idea about personal hygiene during the menstruation period. 78% of women had the idea that a sanitary pad is a good absorbent whereas 10% of women had the impression that a pad made of old clothes is also a good absorbent like a sanitary pad. 12% of women did not have any idea which one is good or better absorbent. Though a large number of women prefer using sanitary pads instead of homemade cloth pads, they use homemade cloth pads due to poor economic conditions. As a result, most of the studied women suffer from reproductive organ-related degasses along with urinary infections. 80% of village women in the present study do not have any knowledge about menstruation before menarche. 16% of women know that whereas 4% do not have any knowledge of menstruation before menarche (Table 1). While considering the attitude towards menstrual hygiene, 70% of studied women agreed to maintain personal hygiene to prevent reproductive-related diseases. 44% of women had a positive attitude towards the cleanness of genital areas with clean water whereas 40% of women did not show any interest in it. The rest 16% could not decide as they did not have any knowledge of it. Washing hands before and after cleaning the genital areas is an important health and hygiene issue.¹³ 80% of agreed with it but 4% of women did not agree. The rest 16% did not have any idea about washing hands as they don't have any knowledge of personal hygiene (Table 2). Knowledge of menstruation is important for women. In the present study, 90% of studied women knew menstruation is a normal physiological procedure whereas 10% did not know whether it is a normal or pathological phenomenon. Cleaning panties or underwear is also an important part of maintaining hygiene. 30% of young women agreed that cleaning panties or underwear with clean water is enough but 50% of women did not agree with that. 20% of women did not have any idea as they don't wear panties or underwear due to poor economic conditions for purchasing panties or underwear (Table 2). A similar observation was observed by Golecha while working on Rajasthani rural women of India.¹⁴

Regarding the practice of menstruation hygiene, 76% of women use shampoo for cleaning their hair. 20% of women disagree with cleaning hair during the menstruation period. 4% of women do not know whether cleaning hair with shampoo during menstruation is a good practice for maintaining hygiene or not. 96% of studied women change sanitary pads 2-4 times a day to maintain menstrual hygiene as they have enough toilet facilities. While disposing of used sanitary pads, 80% of the studied population use home garbage areas to dispose of their used sanitary pads whereas the rest use open fields outside the home. Kaur et al revealed that the disposal of used pads in rural areas is a social problem where women want to keep it secret.³ Sarkar et al

studied rural women and they revealed that 23% of studied women dried up their used sanitary napkins in sunlight after washing them in water.¹¹ They also revealed that 58% of studied women kept their used sanitary napkins in a hidden place for reusing it again (Table 3). 90% of the studied women had regular menstrual periods while only 10% had irregular menstrual periods (Figure 2). The present study also showed that only 8% of the subjects used to take medication during periods for pain management, rest 92% did not need any kind of medication. Remarkably, females within the age range of 15 to 25 years are more knowledgeable about personal hygiene than women having the age range of 26 to 45 years. This may be because the young are more literate than the seniors (Table 3). The present study revealed that the level of knowledge, attitude, and practice among the women from villages were good enough to maintain hygiene during the menstrual period regardless of their education level though they could not maintain it due to their low economic status. Similar findings were also observed by Balqis et al while working on high school girls in rural areas in India.² The findings of the present study were very similar to different studies on Indian rural women.¹⁵⁻²⁵

Limitations

As the study was a part of a project for a Master's Thesis, the duration was limited to only one month. Thus, numbers of subjects were limited to a small group of fifty so that the study could be completed within one month.

CONCLUSION

Thus, from the above study, it was observed that the hygiene awareness during the menstruation period among rural women of West Bengal, India is not satisfactory. Educational intervention is required to improve the hygienic awareness of rural women during the menstrual period.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Anand E, Jayakant S, Sayeed U. Menstrual hygiene practices and its association with reproductive tract infections and abnormal vaginal discharge among women in India. *Sex Reprod Healthcare*. 2015;6(4):249-54.
2. Balqis M, Arya IFD, Ritonga MNA. Knowledge, attitude, and practice of menstrual hygiene among high school students in Jatinangor. *Althea Med J*. 2016;3(2):230-8.
3. Kaur R, Kaur K, Kaur R. Menstrual hygiene, management, and waste disposal: practices and

- challenges faced by girls/women of developing countries. *J Environ Public Health*. 2018.
4. Bhattacharjee M. Menstrual hygiene management during emergencies: a study of challenges faced by women and adolescent girls living in flood-prone districts in Assam. *Indian J Gender Stud*. 2019;26(1-2):96-107.
 5. International Standards for Anthropometric Assessment. Available at: <https://researchportal.vub.be>. Accessed on 20 November 2023.
 6. Likert R. A Technique for the Measurement of Attitudes. *Arch Psychol*. 1932;140:1-55.
 7. Shubha D, Kirti S. Knowledge, Attitude and Practice Regarding Reproductive Health among Urban and Rural Girls: A Comparative Study. *Stud Ethno Med*. 2012;6(2):85-94.
 8. Shanbhag D, Shilpa R, D'Souza N, Josephine P, Singh J, Goud BR. Perceptions regarding menstruation and practices during menstrual cycles among high school going adolescent girls in resource-limited settings around Bangalore city, Karnataka, India. *Int J Collab Res Int Med Public Health*. 2012;4(7):1353-9.
 9. Kuhlmann AS, Henry K, Wall LL. Menstrual hygiene management in resource-poor countries. *Obstet Gynecol Surv*. 2017;72(6):356-9.
 10. Pagore P, Chaudhari S. Menstrual Hygiene Management: A Literature Review. *J Pharma Res Int*. 2021;33(60):2332-9.
 11. Das S, Mallick A, Bharati P, Biswas S. Effects of menstrual characteristics, symptoms, and hygiene-related practices on menstrual experience: A comparative study between freeholder and tenant adolescent schoolgirls of North 24 Parganas, West Bengal, India. *Anthropol Anzeiger*. 2020;77(3):123-9.
 12. Sarkar I, Dobe M, Dasgupta A, Basu R, Shahbabu B. Determinants of menstrual hygiene among school going adolescent girls in a rural area of West Bengal. *J Family Med Prim Care*. 2017;6(3):583-8.
 13. Solvig N, Raja L, George CE, O'Connell B, Gangadharan P, Norman G. Analysis of knowledge of menstruation, hygiene practices, and perceptions in adolescent girls in India. *Modern Health Sci*. 2019;2(1):16-20.
 14. Negi P, Mishra A, Lakhera P. Menstrual abnormalities and their association with lifestyle pattern in adolescent girls of Garhwal, India. *J Family Med Primary Care*. 2018;4:804-9.
 15. Golecha N. Menstrual pattern and related gynecological problems in urban adolescent girls in Rajasthan. *Indian J Obstet Gynecol*. 2018;6(4):379-85.
 16. Rani D. Knowledge and practices of menstrual hygiene among married adolescents and young women in Chittoor District of Andhra Pradesh: India. *IOSR J Nurs Health Sci*. 2014;3(2):6-15.
 17. Shaikh A. Menstrual hygiene and practices among unmarried adolescent girls in Nanded district of Maharashtra State. *SSRN Electr J*. 2020.
 18. Phatak A. Improving menstrual hygiene management in school going adolescent girls: experience from Charutar Region of Gujarat, India. *Indian J Youth Amp Adolesc Health*. 2020;6(3):13-9.
 19. Van EAM, Sivakami M, Thakkar MB, Bauman A, Laserson KF, Coates S, et al. Menstrual hygiene management among adolescent girls in India: a systematic review and meta-analysis. *BMJ*. 2016;6(3):e010290.
 20. Sivakami M, van Eijk AM, Thakur H, Kakade N, Patil C, Shinde S, et al. Effect of menstruation on girls and their schooling, and facilitators of menstrual hygiene management in schools: surveys in government schools in three states in India. *J Global Health*. 2019;9(1):219-28.
 21. Sharma N. Assessment of knowledge and practice regarding menstrual hygiene among school going adolescent girls of Jaipur city. *J Med Sci Clin Res*. 2019;7(7):212-9.
 22. Yaliwal R, Biradar A, Kori S, Mudanur RS, Pujeri S, Shahnnawaz M. Menstrual morbidities, menstrual hygiene, cultural practices during menstruation, and WASH practices at schools in adolescent girls of North Karnataka, India: A Cross-Sectional Prospective Study. *BLDE Univ J Health Sci*. 2020;5(3):44-9.
 23. Behera M, Parida S, Pradhan H, Priyabadini S, Dehury R, Mishra B. Household sanitation and menstrual hygiene management among women: Evidence from household survey under Swachh Bharat (Clean India) Mission in rural Odisha, India. *J Family Med Prim Care*. 2022;11(3):1100-8.
 24. Nelapati S. Knowledge, attitude, and practices assessment of menstrual cycle and management of menstrual hygiene among adolescent girls. *Int J Community Med Public Health*. 2022;9(3):1453-8.
 25. Mukherjee D. Impact of structured teaching programme to enhance the knowledge regarding menstruation and menstrual hygiene among adolescent girls. *J Edu Soc Behav Sci*. 2021;23:99-103.
 26. Kapoor J. Knowledge and practices of menstrual hygiene among adolescent girls of Government women college Parade, Jammu. *Nurs J India*. 2019;4:156-61.

Cite this article as: Bera S, Adhikari A. Prevalence of hygiene awareness during menstruation period among rural women of West Bengal, India. *Int J Community Med Public Health* 2024;11:830-4.